# PREFACE

I can still remember the slide I used to introduce intervention during my workshops in the 1980s on computer applications. It was blank. I *said* that I was using a blank slide because the possibilities for microcomputer use in treatment were endless. The *truth* is that I was not excited about the software packages that were being used in intervention at that time, and I didn't feel comfortable highlighting any in my presentation. This was likely due to my own limited perception of how computers could be used in therapy, because I was familiar only with packages that were based on a "computer-driven, drill-and-practice" format. Later, Paula Cochran and others began to talk and write about using computer activities that allowed more conversational interaction. That was the beginning of my genuine interest in, and personal use of, computer software for intervention. Almost two decades have passed since that time, and computer resources for intervention have progressed from simply being a choice among many treatment tools to offering intervention options that would not be possible without them. In this issue of *Seminars in Speech and Language,* there is a focus on emerging technologies that allow clinicians to address communication skills in ways they have never been able to before.

Cochran and Nelson discuss the use of computers with young children. They encourage clinicians not to wait until a child displays a specific skill thought to be a prerequisite, but to consider instead, using software early in the intervention process. They highlight research data that confirm the relative benefit of applications that allow a child to be in control and that offer opportunities for creative, independent exploration. Throughout their discussion, there is an emphasis on the clinician's role and the importance of ensuring that all activities, computer as well as other types, focus on the communication goals originally set for the child.

Lisa Wood and I extend the discussion regarding computer use in language treatment to issues pertinent for school-age children. We focus primarily on three ares: narratives, writing, and reading skills. Not only can computers be used in treatment to improve language skills, but they also can be used to provide ongoing accommodation for students experiencing difficulties with written and oral language. Talking word processors, books that are read aloud by computers, and other tools provide children with language impairments increased access to print and also serve to heighten their motivation for literacy. In addition, the Internet and World Wide Web provide opportunities that can be socially, as well as academically, rewarding for school-age children and adolescents.

Susan Rvachew and I offer the third paper directed primarily toward intervention with children. We discuss the use of computer software and hardware for treating phonological disorders. Computer software makes it feasible for clinicians to describe a child's errors quite specifically and, it is hoped, to tailor treatment for optimal progress. A variety of tools are available that provide biofeedback, which is potentially useful in establishing initial production of a targeted phoneme. Current software can also give clinicians access to and present stimulus words that are characterized by phonological features of interest. Being able to create data files that are stored and transported on disk is a great improvement over having to locate cards, sort them right

before treatment, and hope that they don't fall out of the carrying case on the way to the therapy session!

Katz and Hallowell discuss some of the most exciting work in computer applications today. The potential to use spontaneous eye movements to measure comprehension and ultimately to interact with an alternative communication system brings hope to many for whom hope had been lost. Unlike applications for children, many of the software packages they describe are intended to be used independently, so the work of the clinician can be expanded. Technology can also serve our discipline in that outcome data across several sites can be readily processed and displayed to highlight the benefits of speech–language intervention.

Bakker discusses the use of technology to reduce frequency of stuttering and its related clinical behaviors. He also illustrates how software and hardware can be used to enhance fluency by effecting changes in speech production or by providing speech-related sensory feedback. Feedback devices, such as a visual metronome, seem particularly encouraging because of their unintrusive nature.

Case illustrates the use of technology in the treatment of voice disorders. As with fluency disorders, technology tools are particularly helpful in facilitating changes in voice production because of their consistent, unbiased feedback. Case emphasizes the importance of integrating technology into a balanced approach to treatment under the direction of a caring clinician skilled in counseling techniques.

Each year, the American Speech–Language–Hearing Association's annual convention includes hands-on laboratory presentations that allow attendees to gain experience with the latest technologies available in our profession. In 1999, the ASHA Convention will be in San Francisco. It is our intent to have lab experiences and other presentations that correspond to the topics presented in this issue of *Seminars in Speech and Language.* Readers who can attend the convention are encouraged to check programming information to determine the schedule for these topics.

This issue of *Seminars* provides clinicians with some principles and examples of optimal use of computers in intervention, which I hope will serve as a source of encouragement to go beyond using computers just for simple word processing. Once clinicians take this step, they'll be hooked!

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Guest Editor